Commonwealth of Kentucky
Natural Resources & Environmental Protection Cabinet
Department for Environmental Protection

DIVISION FOR AIR QUALITY

(*Submit copies of this form for each individual unit. Make additional copies as needed)*

DEP7007A
INDIRECT HEAT EXCHANGER, TURBINE, INTERNAL COMBUSTION ENGINE

Emission Point # _____
Emission Unit # _____

1) Type of Unit (Make, Model, Etc.): _____

Date Installed: _____ **Cost of Unit:** _____
(Date unit was installed, modified or reconstructed, whichever is later.)

Where more than one unit is present, identify with Company's identification or code for this unit:
_____

2a) Kind of Unit (Check one):
1. **Indirect Heat Exchanger** _____
2. **Gas Turbine for Electricity Generation** ____
3. **Pipe Line Compressor Engines:**
   ____ **Gas Turbine**
   ____ **Reciprocating engines**
   (a) 2-cycle lean burn _____
   (b) 4-cycle lean burn _____
   (c) 4-cycle rich burn _____
4. **Industrial Engine** _____

2b) Rated Capacity: (Refer to manufacturer's specifications)
1. **Fuel input (mmBTU/hr):** _____
2. **Power output (hp):** _____
   Power output (MW): _____

SECTION 1. FUEL

3) Type of Primary Fuel (*Check*):

_____ **A. Coal** _____ **B. Fuel Oil # (***Check one***)** _____ **1** _____ **2** _____ **3** _____ **4** _____ **5** _____ **6**

_____ **C. Natural Gas** _____ **D. Propane** _____ **E. Butane** _____ **F. Wood** _____ **G. Gasoline**

_____ **H. Diesel** _____ **I. Other** (*specify*) _____

4) Secondary Fuel (*if any, specify type*): _____

5) Fuel Composition

Type	Percent Ash[a]	Percent Sulfur[b]	Heat Content Corresponding to: [c, d]	
	Maximum	Maximum	Maximum Ash	Maximum Sulfur
Primary				
Secondary				

a. As received basis. Proximate Analysis for Ash. (May use values in your fuel contract)
b. As received basis. Ultimate Analysis for Sulfur. (May use values in your fuel contract)
c. Higher Heating Value, BTU/Unit. (May use values in your fuel contract)
d. Suggested units are: Pounds for solid fuel, gallon for liquid fuels, and cu. Ft. for gaseous fuels. If other units are used, please specify.

6) Maximum Annual Fuel Usage Rate (***please specify units)**:**

7) Fuel Source or supplier: _____
_____

*Should be entered only if applicant requests operating restriction through federally enforceable limitations.

8) MAXIMUM OPERATING SCHEDULE FOR THIS UNIT*

___ hours/day _____ days/week _____ weeks/year

9) If this unit is multipurpose, describe percent in each use category:

Space Heat _____ % Process Heat _____ % Power _____ %

10) Control options for turbine/IC engine (C*heck*)

__ (1) Water Injection
__ (3) Selective Catalytic Reduction (SCR)
__ (5) Combustion Modification)
_ (2) Steam Injection
_ (3) Non-Selective Catalytic Reduction (NSCR)
_ (5) Other (S*pecify*) _____

IMPORTANT: Form DEP7007N must also be completed for this unit.

SECTION II COMPLETE ONLY FOR INDIRECT HEAT EXCHANGERS

11) Coal-Fired Units

_____ Pulverized Coal Fired:
__ Dry Bottom _ Wall Fired
__ Wet Bottom _ Tangentially Fired

_____ Cyclone Furnace

_____ Overfeed Stoker

_____ Fluidized Bed Combustor:
_____ Circulating Bed
_____ Bubbling Bed

Fly Ash Rejection:
☐ Yes ☐ No

_____ Spreader Stoker

_____ Underfeed Stoker

_____ Hand-fed

_____ Other (*specify*) _____

12) Oil-Fired Unit

_____ Tangentially (Corner) Fired

_____ Horizontally Opposed (Normal) Fired

13) Wood-Fired Unit

Fly-Ash Reinjection: ☐ Yes ☐ No

_____ Dutch Oven/Fuel Cell Oven

_____ Stoker

_____ Suspension Firing

_____ Fluidized Bed Combustion (FBC)

14) Natural Gas-Fired Units

__ Low NO_x Burners: ☐ Yes ☐ No

__ Flue Gas Recirculation: ☐ Yes ☐ No

*Should be entered only if applicant requests operating restriction through federally enforceable limitations.

15) Combustion Air Draft: _____ Natural _____ Induced

Forced Pressure _____ lbs/sq. in.

Percent excess air (air supplied in excess of theoretical air) _____ %

SECTION III

16) Additional Stack Data

A. Are sampling ports provided? ☐ **Yes** ☐ **No**
B. If yes, are they located in accordance with 40 CFR 60*? ☐ **Yes** ☐ **No**
C. List other units vented to this stack _____

_____

17) Attach manufacturer's specifications and guaranteed performance data for the indirect heat exchanger. Include information concerning fuel input, burners and combustion chamber dimensions.

18) Describe fuel transport, storage methods and related dust control measures, including ash disposal and control.

_____

_____

_____

_____

_____

*Applicant assumes responsibility for proper location of sampling ports if the Division for Air Quality requires a compliance demonstration stack test.